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## DOES THE MEDIUM OF INSTRUCTION MATTER IN PAKISTAN? EXAMINING THE DETERMINANT & MODERATORS OF ACADEMIC PERFORMANCE AMONG UNIVERSITY STUDENT.

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KEYWORDS	ABSTRACT
<p>English, Medium of Instruction, Academic Performance, Geographical Location, Medium of Secondary Schooling</p>	<p>The present study aims to investigate the impact of English as a medium of instruction (EMI) on the academic performance of undergrad students, and to explore the moderating effect of geographical location, the medium of secondary schooling and schooling types in these relationship. Hypotheses were tested using SPSS 24.0 with a sample of n= 140 student-teacher dyads. Hayes (2013) process macros for SPSS and regression analysis were used as methods. The results show that EMI has a significant positive impact on the academic performance of the students. The moderation analysis reveals that there is not any difference between the performance of students from rural areas and students from urban areas as per results obtained through statistical procedures. Furthermore, the students from non-English medium schools perform comparatively better than students from English medium schools. Likewise, results suggest that there is not any significant difference between performance of the students from the government schools and of students from private schools.</p>
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## INTRODUCTION

Pakistan, being a former British colony, has inherited many British customs and practices. Besides adopting British practices, Pakistan also adopted their language (Ashraf, 2022). The Pakistan constitution of in 1973, formally declared English as the official language of Pakistan (Adnan & Tehseem, 2022; Haidar & Fang, 2019). Being official language, English is playing very important role in all aspects and particularly when it comes to education. In Pakistan, English is not only a language, but it is also considered to be a major instrument to measure someone's education level (Haidar, 2019). Widiastuti, Astawa, Mantra and Susanti (2021) highlighted that students under study considered English quite important for social, economic, and political development, both within Pakistan and internationally. Students also feel that having a command of English

language is necessary for their professional and technological development and even they think that speaking fluent English is a status symbol in Pakistan (Haidar, 2022). This general mindset regarding the English language has made it indispensable for parents and students to cater to this “necessity”. On one side, learning the English language is a matter of life and death for them (Baszile, 2019); on other side, they have very less number of English medium schools that offer such education and environment that is needed to have a command over this language (Manan, 2018).

There is a lot of difference between those elite English medium schools and the English medium schools you would find in middle class and slum areas (Liu, 2022; Rahman, 2005). The saddest part of the story has not been started yet; after passing your Secondary School Certificate, you have no other choice but to study all your subjects in English at all the education levels ahead. This is the reason behind a plethora of English Language Coaching Centers in every nook and cranny of the country (Haidar, Malik & Khattak, 2022). According to a survey of private English language teaching industry in Pakistan, there is huge expansion in number of IELTS preparatory centers (Memon, & Umrani, 2016). Students seek ways of mastering this language in order to get through their colleges and universities with flying colors. According to a study by Manan et al. (2015), in Pakistan people perceive that the English medium policy would be advantageous if implemented at the early stages of the education. Lucky are those, who get their high school education from reputable English medium schools and start learning the English language at a primary level. But what about that overwhelming majority, that has either received education from a non-English medium school or just the mediocre and so-called English-medium school? The EMI policies in the higher education do not accommodate all students coming from different educational backgrounds and might give rise to the socio-class variations in society (Mahboob, 2017).

This study aims at exploring whether EMI policies in higher education have any impact on the students’ learning and performance coming from different areas and having diverse educational backgrounds. Specifically, present study aims to identify whether there is any difference in the performance of students having command over the English language and of those who have not. For this purpose, we also aim to explore moderating effect of geographical location of students (e.g., rural or urban), medium of secondary school (English or non-English Medium), and type of secondary school (private or government). Students feel that having a command of English language is necessary for their professional and technological development and even they think that speaking fluent English is status symbol in Pakistan. In summary, this research contributes to the education field and language literature in two ways. First, this study contributes to clear the doubts about whether using English language (L2) in higher education is beneficial for the students at uniform level or is detrimental to their performance, keeping in mind the different educational backgrounds of the students. Second, we contribute to exploring whether students’ having strong education background of higher secondary level perform better than the students who do not have such a strong background. Putting together, this research will be of great help for the policymakers and teachers to decide which language will be more conducive to inclusive learning at the higher education level; the native language (L1) or/and the English language (L2).

## LITERATURE REVIEW

### English as Medium of Instruction (EMI)

In Pakistan, having proficiency in the English language is considered a *sin qua non* for progress in academic and professional areas. In fact, English language is considered a passport to success and national progress (Haidar, 2019; Shamim, 2017). Not only in Pakistan but in other countries as well, where English has status of second language (L2), it holds great worth. For example in Turkey, English has become most essential means of interaction for international communication since the mid of 1980s (Aksoy, 2020; Doğançay & Kiziltepe, 2005). There has been an increase in number of schools with EMI since then (Başıbek, Dolmacı, Cengiz, Bür, Dilek & Kara, 2014; Kirkgoz, 2007). The motivation behind introducing English language into Turkey's education system was its willingness to foster relationships across borders (Demirel, 1990; Aksoy, 2020). Not only in Turkey but today, almost every country wants to make most of globalization culture (Xu, 2013). This desire of nations has made it indispensable for them to learn English as it is an international lingua franca used for linguistic and cross-cultural communication (Sung, 2013). It is vital to examine the perceptions of teachers and students about ease or difficulty they face while using English inside classroom. Several studies have been conducted to understand the perception of teachers, students and parents about EMI (Liu, 2022; Kim, 2011; Wang & Kirkpatrick, 2020).

A study conducted by the British Council to examine the global phenomena regarding EMI in 55 non-English speaking countries revealed that: Some countries' policymakers, administrators, educators, and parents support EMI because they see it as the global passport (Haidar, 2019; Rehman, 2005). Thus, policymakers see EMI as a tool for broadening their educational options globally and giving students the opportunity of interaction with the intellectual and commercial sectors throughout the world. They view EMI as the way to significantly increase global mobility. Some see EMI as a tool to boost English language skills in their own nation and ensure that their domestic students can compete on a global level (Julie, 2015). The current worldwide situation has brought even more attention to the value of EMI in the business and economics, especially for business students. For business students to secure a lucrative job and have a successful career, they must have a greater level of English proficiency (Louhiala & Kankaanranta, 2012; Taillefer, 2007; Haidar, 2019). Thus, according to a study of the literature, there have been relatively few research looking at how teachers and students perceive EMI in the context of the sub-continent (Tania & Phyak, 2022; Islam, Ramalingam & Hoque, 2022). We decided to explore how the EMI affected business students' academic performance in Pakistan as a result of this requirement for research.

### **EMI & Academic Performance**

Numerous researches have been conducted to compare the academic performance of students studying in EMI versus the students studying in their native language (L1). The language used by a teacher in classroom affects the comprehension level of students and ultimately affects their performance in subject. According to studies (Vinke, 1995; Klaassen, 2001; Islam et al., 2022), classroom environment becomes less interactive when the subjects are being taught in English (L2) rather than in Dutch. Another study by Thøgersen and Airey, (2011) concluded that lecturers speak at a comparatively slow rate while delivering a lecture in English (L2) than in the native language resulting in fewer syllables per second. Airey and Linder, (2006 & 2007), found that students face difficulty while asking and answering the questions in English and similarly while taking notes. While a study (Dafouz & Camacho, 2016) conducted in a Spanish university, drew some diverse conclusions. In this study, students' financial accounting grades were compared for students studying in EMI and students studying in a non-EMI setting. The study concluded that

there were no significant differences in students grades studying in EMI as compared to non-EMI counterparts.

Our study is quite different from above-cited works in many ways; for example, in above studies, a comparison has been made between students studying in EMI with students studying in non-EMI institution, while our research is trying to figure out the impact (if any) on the performance of students who are studying in an EMI setting on compulsion basis. These students do not have option between an EMI and a non-EMI. Students studying in Pakistani universities come from different backgrounds and above all from schools having different mediums of instruction. For analyzing students' academic performance, besides taking into account grades, their performance will be measured on 5-criteria; task performance, dedicative performance, adaptive performance, interpersonal performance and public speaking performance. [Gong \(2016\)](#) adopted 4-performance criteria from [Wen \(2005\)](#) for evaluating performance of employees in workplace. [Wen \(2005\)](#) developed a performance rating scale for Chinese work environment based on the literature and came to conclusion that there are 4-components of performance like task performance, dedicative performance, interpersonal performance, and adaptable performance. Task performance refers to the actions that traditional personnel prioritizes and which support the technical foundation of business. This comprises job knowledge, work quality and work skill ([Dalal, 2005](#); [Gong et al., 2020](#)).

It has been established that interpersonal and devoted performance are separate elements of the performance ([Hesketh & Allworth, 1997](#), [Zhang et al., 2020](#)). "Interpersonal performance" comprises job dedication, interpersonal facilitation, and interpersonal collaboration. It includes trouble coping. The final phrase, "adaptive performance," incorporates concepts like creativity, self-directed learning, and the job adjustment ([Allworth & Hesketh, 1999](#); [Suharti & Pramono, 2016](#); [Suharti et al. 2019](#)). They view EMI as the way to significantly increase global mobility. Some see EMI as a tool to boost English language skills in their own nation and ensure that their domestic students can compete on the global level. Our study is of its first kind to evaluate the students performance on these criteria. Besides these criteria, we have added another performance criterion for students; public speaking performance. By public speaking performance, we mean students' ability to communicate in English in front of an audience. Current study will test the threshold hypothesis which states that in order to take benefits from second language, one must hold certain proficiency in that language. The study will analyze whether EMI affects these student performance, having different levels of proficiency in English. Henceforth, our first hypothesis is:

Hypothesis 1: The EMI has a significant impact on the students' academic performance.

### **Moderating Effect of Students' Geographic Location**

In Pakistan, an overwhelming majority of students come from rural areas for studying in urban institutions ([Mahboob, 2017](#)). In this connection, the medium of instruction in schools in rural areas is either Urdu or any other regional language ([Coleman, 2010](#); [Abbas & Iqbal, 2018](#)). Most teachers in rural areas do not possess proficiency in second language pedagogy and applied linguistics ([Warsi, 2004](#); [Mahboob, 2020](#)). In this connection, this led us towards our second hypothesis:

Hypothesis 2a: Effect of EMI on students' academic performance is contingent on geographical location such that the relationship would be stronger for urban students' performance than for rural students.

### Moderating Effect of Secondary Schools' Medium of Instruction

Even in urban areas, schools are teaching through non-EMI. Obviously, the students who have achieved their secondary education in an EMI setting have the better understanding of English text than those who have studied in a non-EMI setting (Saeed, Iqbal & Azam, 2012; Bukhari, & Awan, 2018). In this connection, this difference in the schooling background gave us our third hypothesis:

Hypothesis 2b: Relationship between EMI and students' academic performance is contingent on the students' secondary education medium of instruction, and it is stronger for students who have graduated from English-medium secondary schools than for students who have graduated from non-English-medium secondary schools.

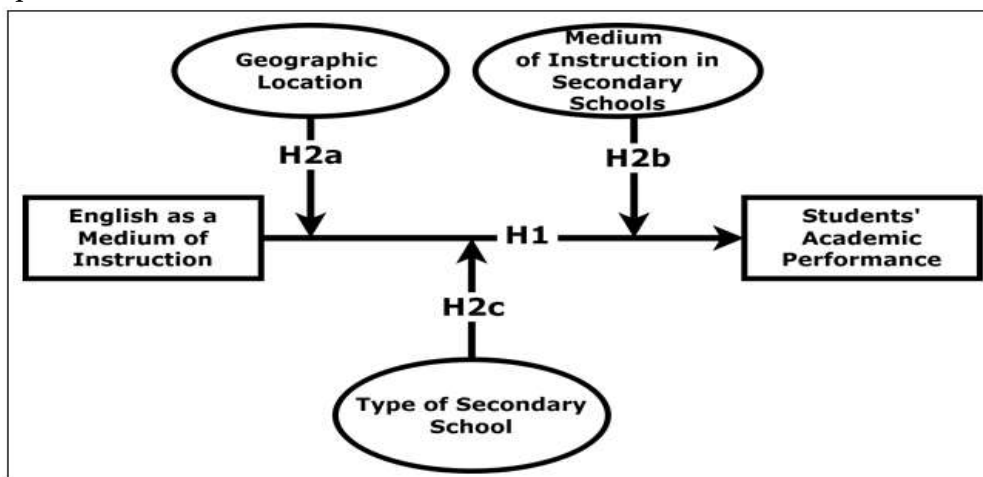
### Moderating Effect of Secondary School Type

Likewise, the government sector schools have exhibited weak performance and poor quality of education as compared to private schools in Pakistan (Benz, 2016; Ishaq, Azan, Zin, Rosdi, Abid, & Ijaz, 2020; Raza, Khan, Khan, Ali & Bano, 2020; Siddiqui, 2017). The effect of English as a language of instruction on a student's performance is influenced by the type of secondary school they attend; this link is stronger for students who attended private schools than for those who attended public schools. Consequently, to determine whether that difference in education level has any significant influence on the students' academic performance, we concluded our fourth hypothesis:

Hypothesis 2c: Effect of the English language on a student's performance will vary depending on type of secondary school they attend. The relationship would be stronger for students who have gained their secondary education from a private school than for students who have gained their secondary education from a government school.

**Figure 1**

*Conceptual Framework*



## RESEARCH METHODOLOGY



### **Participants**

In this research, using paper-and-pencil survey, undergraduate business administration students from Pakistani universities were recruited based on the convenience sampling. The participants included (Male; 54% and females 46%. 49% of the students belonged to urban areas and 52% of the students belonged to rural areas. 75% of students achieved their secondary education from an English medium school and 25% of them achieved their secondary education from the Non-English medium school. 31% of students achieved their secondary education in a government school and 69% of the students achieved their secondary education in a private school. In this connection, for surveying the teachers, the separate instrument was used and we approached the teachers, who were teaching the same classes from where the sample of students was taken for research.

### **Procedure**

Based on the prior procedure (Chen et al., 2019; Gong et al., 2020; Zhang et al., 2019; Mehmood et al., 2020; Gilal et al., 2020), data were gathered using two different types of questionnaires, one for teachers and the other for students. The goal of collecting the data was explained to the participants. The questionnaires were distributed among the students across the various campus locations including the library, bookshop, student lawn, and halls of classrooms. In this linking, the survey that mapped into dependent, independent and moderating variables was provided to the concerned students with a total time allotment of 10-15 minutes to complete questionnaire. Likewise, the teachers teaching the same students (respondents) were asked to fill up desired questionnaire when they get time. All the questionnaires from teachers were received within a month.

### **Measures**

Using the recommendations from the prior research (Gilal et al. 2019a; 2019b; Gilal et al., 2022; Gong et al., 2022; Shahid et al., 2022), we borrowed previously validated scale items from prior research. The instrument used to collect data from students was adopted from Tung et al. (1997); Aizawa et al. (2020); Rowland and Murray (2020). Students were required to mention gender, their geographical affiliation (rural or urban), medium of their secondary education, whether they achieved their secondary education from private or government school, and CGPA of the last semester. Besides, students' questionnaire included 13 closed-ended questions. All of these questions were intended to figure out students' perceptions of impact of EMI on their academic performance.

The responses were recorded on the five-point Likert scale with 1 being strongly disagreed and 5 strongly agreeing with the statement. The instrument used to collect data from teachers was adopted from Zhang, Zhang, Song & Gong (2016). The teachers were required to mention their gender. The questionnaires included 24 items. Through these items, teachers were intended to measure students' academic performance on 5 criteria. Task performance had 7 items, dedicative performance had 5 items, the interpersonal performance had 6 items, the adaptive performance had 3 items as well as public speaking performance had 3 items. The responses were recorded on the five-point Likert scale wherein 1 being strongly disagreed and 5 strongly agreeing with the statement.

### **Data Analysis Technique**

We used sample of n=140 student-teacher dyads and SPSS 24.0 to test hypotheses in accordance with methodology suggested in previous research (Fan et al., 2018; Gilal et al., 2011). Regression

analysis and Hayes (2018) process macros for SPSS were specifically employed as data analysis methods.

## RESULTS OF STUDY

### Simple Regression Analysis

To explore whether EMI has significant effect on student performance, we ran simple regression analysis using SPSS 24.0. Result shows that EMI has statistically a significant effect on students' academic performance ( $\beta = 0.347$ ,  $p < 0.001$ ). Therefore, Hypothesis 1 is confirmed by our data (Table 1).

**Table 1**  
*Regression Analysis Results*

Variables	Standardized $\beta$	t-value	p-value
(Constant)		10.913	0.000
EMI	0.347	4.444	0.000
R square	0.121	Adjusted R square	0.115

Notes: Predictors: EMI; Dependent variable: Students' performance

### Tests of Moderation

Hypotheses H2a, H2b, and H2c relating to moderation effect of geographical location, medium of secondary school, and type of secondary school, were tested using a procedure suggested by Hayes, (2018). Hypothesis H2a suggests that geographical location of students will moderate impact of EMI on students' academic performance. The results do not demonstrate a significant interaction effect of EMI and geographical location on students' performance ( $\beta = -0.1960$ ,  $p = ns$ ). H2a is not confirmed (Table 2). Hypothesis H2b suggests that the medium of secondary school will moderate impact of EMI on students' academic performance. The results demonstrate a significant interaction effect of EMI and medium of secondary school on students' performance ( $\beta = 0.3960$ ,  $p < 0.01$ ), with a significant change in  $R^2 = 0.0403$ . H2b is confirmed. Furthermore, results showed that this effect is significant for students who have achieved their secondary education from non-English medium school ( $\beta = 0.6137$ ,  $p < 0.001$ : CI = 0.3700 to 0.8547) than from students from English medium background ( $\beta = 0.2177$ ,  $p < 0.01$ : CI = 0.0638 to 0.3717), (Table 3). H2c suggests that type of secondary school will moderate effect of EMI on students' academic performance. Results do not validate a significant interaction effect of EMI and type of secondary school on students' academic performance ( $\beta = -0.170$ ,  $p = ns$ ). H2c is not confirmed (Table 4).

**Table 2**  
*Moderation of Geographical Location*

Predictor	$\beta$	t	p	f	R2	Adjusted R2
Geographical location	0.810	1.565	0.119	7.860	0.142	0.011
EMI	0.379	4.398	0.000			
Geographical location x EMI	-0.196	-1.372	0.172			
Geographical Location	Cond: Effect	SE	z	p	LLCI	ULCI
Students from Urban areas	0.379	0.086	4.398		0.209	0.550
Students from Rural areas	0.183	0.113	1.615		-0.041	0.408

Notes: Predictors: EMI; Dependent variable: Students' performance

**Table 3**  
*Moderation of Medium of Secondary School*

Predictor	$\beta$	t	p	f	R2	Adjusted R2
Medium of Secondary School	-1.755	-3.252	0.001	7.860	0.223	0.040
EMI	0.217	2.796	0.059			
Medium of Secondary School x EMI	0.396	2.715	0.007			
Medium of Secondary Schooling	Cond: Effect	SE	z	p	LLCI	ULCI
English Medium	0.217	0.770	2.796	0.005	0.630	0.371
Non-English Medium	0.613	0.123	4.977	0.000	0.370	0.857

Notes: Predictors: EMI; Dependent variable: Students' performance

**Table 4**  
*Moderation of Type of School*

Predictor	$\beta$	t	p	f	R2	Adjusted R2
Type of School	0.493	0.881	0.379	7.578	0.138	0.007
EMI	0.493	4.323	0.000			
Type of School x EMI	-0.170	-1.097	0.274			
Type of Schooling	Cond: Effect	SE	z	p	LLCI	ULCI
Private Schooling	0.349	0.080	4.323	0.000	0.189	0.509
Government Schooling	0.179	0.132	1.352	0.178	-0.082	0.441

Notes: Predictors: EMI; Dependent variable: Students' performance

## FINDINGS AND DISCUSSION

This research intends to investigate the effect of EMI on the academic performance of students. Our study contributes to the field of education and language literature in many ways. First, it attempts to explore whether having English language as a language of higher studies curriculum and medium of instruction, is beneficial for student's academic performance or is it detrimental to their performance and understanding of content. Secondly, present study has attempted to explore whether students' performance at the higher education gets affected by level of education they have received at higher secondary level. Current research revealed that EMI has a positive and strong impact on academic performance of students. This research confirms a prior study that argues that EMI does not negatively impact the academic performance of students (Dafouz, & Camacho, 2016; Masrai et al., 2022a; Masrai et al., 2022b). On the other side, present research contradicts studies which argue that use of English language hinders the necessary interaction in class (Vinke, 1995; Klaassen, 2001, as cited in Thøgersen & Airey, 2011), and finds it difficult to ask and answer questions in English in the classroom (Airey, & Linder, 2006 & 2007, as cited in Thøgersen, & Airey, 2011). Moreover, moderation tests revealed that geographical location of students does not significantly moderate the relationship between EMI and students' academic performance.

We can say that whether a student has achieved his/her higher secondary education from a rural area or from an urban area will not make any difference in their academic performance at higher education level. These results contradict those of Campbell et al. (2021), Gilal et al. (2018), and Sofu et al. (2009), who found that students' geographic location had a significant impact on their academic success and other behavioral reactions. Furthermore, moderation effect for medium of instruction in the higher secondary school revealed that the students who have achieved their



higher secondary education from non-English medium school perform better at higher education level than those students who have studied from an English medium school. These results are also partially supported by [Macaro et al. \(2018\)](#); [Mukhtar et al. \(2021\)](#) studies which suggest that the secondary schools' medium of instruction can have a considerable influence on the students' responses. Finally, the moderation test for the type of higher secondary school revealed that the type of school does not significantly moderate the relationship between EMI and the students' academic performance. Therefore, these findings also contradict research by [Bhagat \(2017\)](#) and [Heiskala et al. \(2021\)](#), which contends that the type of the higher secondary school might have a significant impact on students' replies. Overall, these findings imply that EMI has a significant effect on the students' learning and the academic performance. Furthermore, if the EMI policy is implemented across the board, beginning at the primary level, effect could be considerably more significant.

## CONCLUSION

The current study had two main objectives. First, to examine the effect of EMI on the academic performance of students. Second, to explore the moderating effect of geographical location, the medium of secondary schooling, and schooling types on relationship between EMI and academic performance of university students. Our study establishes the significant positive effect of EMI on the academic performance of the students. According to the moderation analysis, there are no differences in academic performance of rural and urban students. Additionally, students who attend schools where English is not primary language perform far better than those who attend English-only schools. Last but not least, the findings imply that there is no discernible difference in academic achievement between students attending government and private schools. Despite several significant advancements in the realm of pedagogic research, the current study has some limitations. The sample was drawn from interior Sindh universities, where most of the students are from rural backgrounds. Thus, a study can be carried out in which the sample should consist of university students from the major cities. Additionally, study's moderation results showed that students from the non-English medium schools do better than students from English medium schools. However, it does not explain the causes of this surprise result. Thus, the present study has paved the way for future research in the following ways. For instance, the qualitative study can be conducted to figure out the reasons behind the better performance of students from non-English medium schools at higher education level. Furthermore, a secondary-level comparative study can be done to compare the IQ scores of the pupils in English- and non-English-medium schools.

## Implications For Theory & Practice

The current study led us towards some innovative findings and it contradicts some previously accepted notions. Like, it was anticipated before researching that the students from the English medium schools do perform better at the higher education levels than those who are from non-English Medium schools but current study reveals that the case is otherwise. Thus, the reason could be the challenging environment that students from the non-English medium schools are encounter.

This challenge might have been enforcing them to work harder than other students and hence they perform better. Further research needs to be conducted to look out for the reasons behind better academic performance of such students. The current study contradicts somewhat similar research ([Memon et al., 2016](#)), which states that students from private schools get better results

on medical entrance test. According to present research, whether student is from private school or a government school, it does not affect his/her academic performance at the higher education level.

Most significantly, this study contradicts famous threshold hypothesis (Cumins, 1976), which states that the second language proficiency is necessary to get benefited from that the particular language. While this study suggests that even if the students do not have proficiency in English which is their second language, still they can perform better in an EMI set. Therefore, keeping in mind the above-stated results of the research, policymakers need to take this issue on a serious note.

Altogether, as observed in the responses, students in Pakistan love to learn the English language and feel comfortable while studying all the subjects in English at the higher education level. This demand for learning the English language at the domestic level and international level requires the implementation of the uniform policy regarding the language of the syllabus at primary and secondary levels of education. The schools and teachers are also need to provide a conducive environment for the students starting from the primary level where they can learn the English language.

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